

SEQUENCE LISTING

<110> Friddle, Carl Johan  
Gerhardt, Brenda  
Hilbun, Erin  
Turner, C. Alexander Jr.

<120> Novel Human Ion Channel-Related Proteins  
and Polynucleotides Encoding the Same

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<150> US 60/258,595  
<151> 2000-12-28

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35 40 45  
Ile Phe Val Asp Arg Asp Gly Asp Leu Phe Ser Phe Ile Leu Asp Phe  
50 55 60  
Leu Arg Thr His Gln Leu Leu Leu Pro Thr Glu Phe Ser Asp Tyr Leu  
65 70 75 80  
Arg Leu Gln Arg Glu Ala Leu Phe Tyr Glu Leu Arg Ser Leu Val Asp

85	90	95
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His Phe Leu Ser Arg Asn Thr Gln Ala Phe Phe Arg Val Phe Gly Ser		
115	120	125
Cys Ser Lys Thr Ile Glu Met Leu Thr Gly Arg Ile Thr Val Phe Thr		
130	135	140
Glu Gln Pro Ser Ala Pro Thr Trp Asn Gly Asn Phe Phe Pro Pro Gln		
145	150	155
Met Thr Leu Leu Pro Leu Pro Pro Gln Arg Pro Ser Tyr His Asp Leu		
165	170	175
Val Phe Gln Cys Gly Ser Asp Ser Thr Thr Asp Asn Gln Thr Gly Val		
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Phe Ser Leu Lys Thr		
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caagacctgc tcttggag gtacatttcc taagccggaa cactcaagct tttttcagg 660  
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cacttcacta cacgcctgtc cacactgcgg tgctacgaag acaccatgtt ggcagccatg 240  
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35 40 45  
Phe Pro Glu Val Val Pro Leu Asn Ile Gly Gly Ala His Phe Thr Thr  
50 55 60  
Arg Leu Ser Thr Leu Arg Cys Tyr Glu Asp Thr Met Leu Ala Ala Met  
65 70 75 80  
Phe Ser Gly Arg His Tyr Ile Pro Thr Asp Ser Glu Gly Arg Tyr Phe  
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Ile Asp Arg Asp Gly Thr His Phe Gly Tyr Val Ser Pro Ser Thr Ile  
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cttaacatcg gaggggctca cttcaactaca cgcctgtcca cactgcggtg ctacgaagac 180  
accatgttgg catccatgtt cagtggccgg cactacatcc ccacggactc cgagggccgg 240  
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gtagtcctag caggtgatta g 321

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Phe Gln Phe Pro Glu Val Val Pro Leu Asn Ile Gly Gly Ala His Phe  
35 40 45  
Thr Thr Arg Leu Ser Thr Leu Arg Cys Tyr Glu Asp Thr Met Leu Ala  
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Ser Met Phe Ser Gly Arg His Tyr Ile Pro Thr Asp Ser Glu Gly Arg
65           70          75          80
Tyr Phe Ile Asp Arg Asp Gly Thr His Phe Gly Tyr Val Ser Pro Ser
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Thr Ile Asn Phe Val Val Leu Ala Gly Asp
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ccacgcaggc ggggcacgcg ctgcggctgc tgccacagga gtttcctgag gttgtcccc 360
ttaacatcg aggggctcac ttcaactacac gcctgtccac actgcgggtc tacgaagaca 420
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<213> homo sapiens
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35	40	45	
Ala Gln Leu Thr Lys Ser Asn Ala Pro Val His Ile Asp Val Gly Gly			
50	55	60	
His Met Tyr Thr Ser Ser Leu Ala Thr Leu Thr Lys Tyr Pro Asp Ser			
65	70	75	80
Arg Ile Ser Arg Leu Phe Asn Gly Thr Glu Pro Ile Val Leu Asp Ser			
85	90	95	
Leu Lys Gln His Tyr Phe Ile Asp Arg Asp Gly Glu Ile Phe Arg Tyr			
100	105	110	
Val Leu Ser Phe Leu Arg Thr Ser Lys Leu Leu Leu Pro Asp Asp Phe			
115	120	125	
Lys Asp Phe Ser Leu Leu Tyr Glu Glu Ala Arg Tyr Tyr Gln Leu Gln			
130	135	140	
Pro Met Val Arg Glu Leu Glu Arg Trp Gln Gln Glu Gln Gln Arg			
145	150	155	160
Arg Arg Ser Arg Ala Cys Asp Cys Leu Val Val Arg Val Thr Pro Asp			
165	170	175	
Leu Gly Glu Arg Ile Ala Leu Ser Gly Glu Lys Ala Leu Ile Glu Glu			
180	185	190	
Val Phe Pro Glu Thr Gly Asp Val Met Cys Asn Ser Val Asn Ala Gly			
195	200	205	
Trp Asn Gln Asp Pro Thr His Val Ile Arg Phe Pro Leu Asn Gly Tyr			
210	215	220	
Cys Arg Leu Asn Ser Val Gln Val Leu Glu Arg Leu Phe Gln Arg Gly			
225	230	235	240
Phe Ser Val Ala Ala Ser Cys Gly Gly Val Asp Ser Ser Gln Phe			
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Thr Ala Val Arg Ile Lys Gln Glu Pro Leu Asp			
275	280		

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<212> DNA  
<213> homo sapiens

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tatttcattt accggatgg ggagatttc cgctacgtcc tgagcttcct gcggacgtcc 360  
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<210> 12

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<212> PRT

<213> homo sapiens

<400> 12

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35 40 45  
Ala Gln Leu Thr Lys Ser Asn Ala Pro Val His Ile Asp Val Gly Gly  
50 55 60  
His Met Tyr Thr Ser Ser Leu Ala Thr Leu Thr Lys Tyr Pro Asp Ser  
65 70 75 80  
Arg Ile Ser Arg Leu Phe Asn Gly Thr Glu Pro Ile Val Leu Asp Ser  
85 90 95  
Leu Lys Gln His Tyr Phe Ile Asp Arg Asp Gly Glu Ile Phe Arg Tyr  
100 105 110  
Val Leu Ser Phe Leu Arg Thr Ser Lys Leu Leu Leu Pro Asp Asp Phe  
115 120 125  
Lys Asp Phe Ser Leu Leu Tyr Glu Glu Ala Arg Tyr Tyr Gln Leu Gln  
130 135 140  
Pro Met Val Arg Glu Leu Glu Arg Trp Gln Gln Glu Gln Gln Arg  
145 150 155 160  
Arg Arg Ser Arg Ala Cys Asp Cys Leu Val Val Arg Val Thr Pro Asp  
165 170 175  
Leu Gly Glu Arg Ile Ala Leu Ser Gly Glu Lys Ala Leu Ile Glu Glu  
180 185 190  
Val Phe Pro Glu Thr Gly Asp Val Met Cys Asn Ser Val Asn Ala Gly  
195 200 205  
Trp Asn Gln Asp Pro Thr His Val Ile Arg Phe Pro Leu Asn Gly Tyr  
210 215 220  
Cys Arg Leu Asn Ser Val Gln Val Arg Ala Ala Arg Cys Pro Leu Pro  
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<212> DNA

<213> homo sapiens

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ggggagattt tccgctacgt cctgagcttc ctgcggacgt ccaagctgct gcttccggat 300  
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His Ile Asp Val Gly Gly His Met Tyr Thr Ser Ser Leu Ala Thr Leu  
35 40 45  
Thr Lys Tyr Pro Asp Ser Arg Ile Ser Arg Leu Phe Asn Gly Thr Glu  
50 55 60  
Pro Ile Val Leu Asp Ser Leu Lys Gln His Tyr Phe Ile Asp Arg Asp  
65 70 75 80  
Gly Glu Ile Phe Arg Tyr Val Leu Ser Phe Leu Arg Thr Ser Lys Leu  
85 90 95  
Leu Leu Pro Asp Asp Phe Lys Asp Phe Ser Leu Leu Tyr Glu Glu Ala  
100 105 110  
Arg Tyr Tyr Gln Leu Gln Pro Met Val Arg Glu Leu Glu Arg Trp Gln  
115 120 125  
Gln Glu Gln Glu Gln Arg Arg Ser Arg Ala Cys Asp Cys Leu Val  
130 135 140  
Val Arg Val Thr Pro Asp Leu Gly Glu Arg Ile Ala Leu Ser Gly Glu  
145 150 155 160  
Lys Ala Leu Ile Glu Glu Val Phe Pro Glu Thr Gly Asp Val Met Cys  
165 170 175  
Asn Ser Val Asn Ala Gly Trp Asn Gln Asp Pro Thr His Val Ile Arg  
180 185 190  
Phe Pro Leu Asn Gly Tyr Cys Arg Leu Asn Ser Val Gln Val Leu Glu  
195 200 205  
Arg Leu Phe Gln Arg Gly Phe Ser Val Ala Ala Ser Cys Gly Gly Gly  
210 215 220  
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225 230 235 240  
Arg Pro Gln Pro Thr Pro Thr Ala Val Arg Ile Lys Gln Glu Pro Leu  
245 250 255  
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<210> 15  
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<212> DNA  
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His	Ile	Asp	Val	Gly	Gly	His	Met	Tyr	Thr	Ser	Ser	Leu	Ala	Thr	Leu
		35							40						45
Thr	Lys	Tyr	Pro	Asp	Ser	Arg	Ile	Ser	Arg	Leu	Phe	Asn	Gly	Thr	Glu
		50							55						60
Pro	Ile	Val	Leu	Asp	Ser	Leu	Lys	Gln	His	Tyr	Phe	Ile	Asp	Arg	Asp
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Gln	Glu	Gln	Glu	Gln	Arg	Arg	Arg	Ser	Arg	Ala	Cys	Asp	Cys	Leu	Val
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Val	Arg	Val	Thr	Pro	Asp	Leu	Gly	Glu	Arg	Ile	Ala	Leu	Ser	Gly	Glu
		145							150						160
Lys	Ala	Leu	Ile	Glu	Glu	Val	Phe	Pro	Glu	Thr	Gly	Asp	Val	Met	Cys
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Asn	Ser	Val	Asn	Ala	Gly	Trp	Asn	Gln	Asp	Pro	Thr	His	Val	Ile	Arg
									180						190
Phe	Pro	Leu	Asn	Gly	Tyr	Cys	Arg	Leu	Asn	Ser	Val	Gln	Val	Arg	Ala
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Ala	Arg	Cys	Pro	Leu	Pro	Ala	Glu	Pro	Pro	Ala	Ser	Ala	Glu	Pro	Ser
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<212> DNA  
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